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## 1 Routine/Function Prologues

### 1.0.1 stats.F90 (Source File: stats.F90)

Calculates statistics for a given variable

REVISION HISTORY:

Nov 11 1999: Jon Radakovich; Initial code

INTERFACE:

```
subroutine stats(var,udef,nch,mean,stdev,min,max)
```

ARGUMENTS:

```
integer :: nch
real :: var(nch)
real :: mean,dev,stdev,min,max,udef,vsum
```

CONTENTS:

```
vsum=0.
mean=0.
dev=0.
stdev=0.
min=100000.
max=-100000.
do t=1,nch
  if(var(t).ne.udef)then
    vsum=vsum+var(t)
    if(var(t).gt.max)max=var(t)
    if(var(t).lt.min)min=var(t)
  endif
enddo
if(vsum.eq.0.)then
  max=0.
  min=0.
endif

mean=vsum/float(nch)

do t=1,nch
  if(var(t).ne.udef)then
    dev=dev+(var(t)-mean)**2
  endif
enddo
stdev=(dev*(float(nch)-1)**(-1))**(.5)

return
```